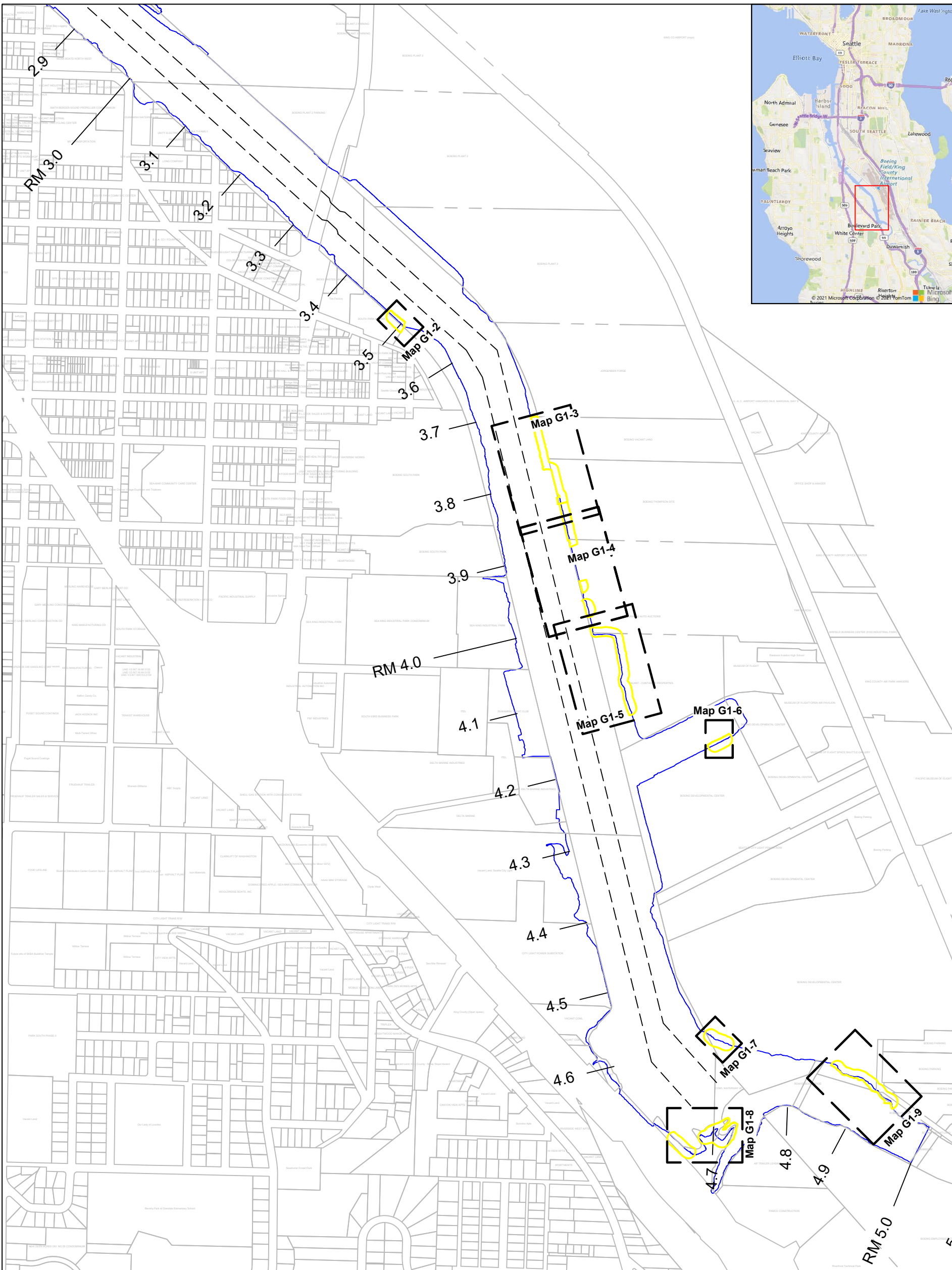


\\gala-cad\p\projects\0067-king-county\LDW Upper Reach Engineering Services\0067-RP-024 Topo Survey.dwg Map G1-1
Feb 04, 2022 9:53am lgriga



Source: Topographic survey by True North Land Surveying, Inc. performed between June 30, 2021 and August 10, 2021.
Horizontal Datum: Washington State Plane, North Zone, North American Datum of 1983/91, U.S. Survey Feet; WSDOT MON GP17005-176 & GP17005-181
Vertical Datum: Mean Lower Low Water (MLLW), MLLW Converted from NAD88 (NAVD88 + 2.34' to MLLW).
Vertical benchmarks:
COS BM 3765-4302 2" Brass Disk SET AT 8TH AVE S & S Portland St in center of conc walk. EL:13.322 (NAVD88), Converted EL:15.662 (MLLW)
COS BM SNV-5411 2" Brass disk stamped COS top of curb around US Bank sign, at southeast corner, East Marginal Way S & S Michigan St. EL: 16.866 (NAVD 88) Converted EL: 19.226 (MLLW)

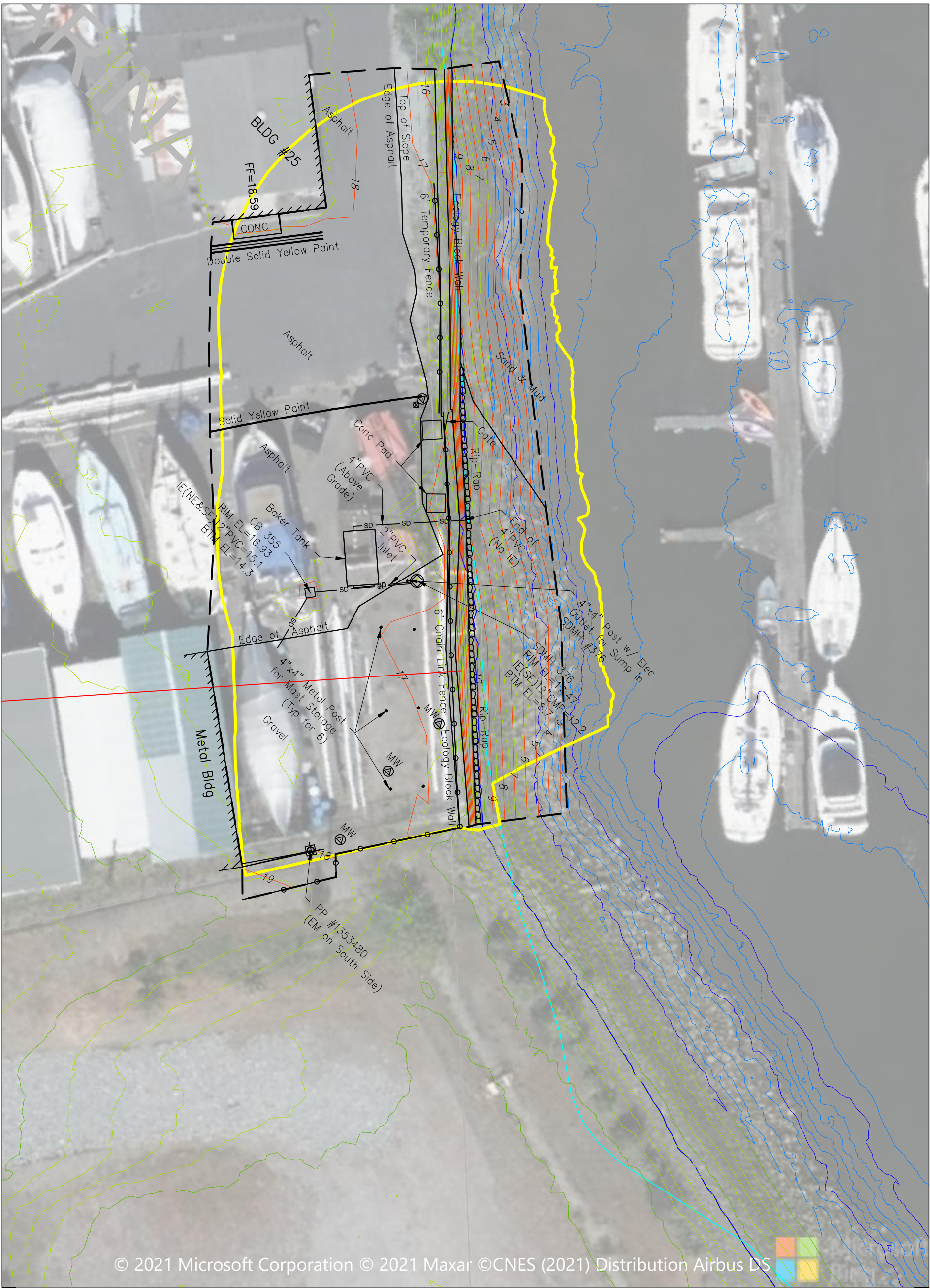
- Legend:**
- Federal Navigation Channel
 - Channel Centerline
 - LDW Upper Reach Approximate Boundary
 - Topographic Survey Area



Map G1-1.
Topographic Survey Areas and Geodetic Control Survey

PRE-DESIGN INVESTIGATION DATA EVALUATION
REPORT FOR THE LDW UPPER REACH

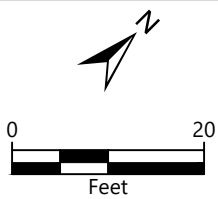
DRAFT



Source: Topographic survey by True North Land Surveying, Inc. performed between June 30, 2021 and August 10, 2021. Bathymetric survey by Northwest Hydro performed between April 18, 2019 and May 15, 2019. Additional survey by Northwest Hydro performed June 2020. Composite bathymetry data updated December 23, 2020. 2016 LiDAR by Puget Sound LiDAR Consortium http://pugetsoundlidar.ess.washington.edu/lidaratarestricted/projects/2016king_county.html
Horizontal Datum: Washington State Plane, North Zone, North American Datum of 1983/91, U.S. Survey Feet
Vertical Datum: Mean Lower Low Water (MLLW)

Legend:

- | | |
|--------------------------------------|--|
| --- Federal Navigation Channel | --- 2021 True North Survey Limits |
| 250+00 Channel Centerline | 2021 True North Contours (1' & 5' Intervals) |
| LDW Upper Reach Approximate Boundary | 2019/2020 Bathymetry by Others (1' & 5' Intervals) |
| Proposed Topographic Survey Area | 2016 LiDAR by Others (1' & 5' Intervals) |



Map G1-2.
Topographic Survey Area,
River Mile Area 3.5W

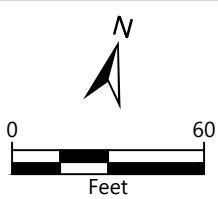
PRE-DESIGN INVESTIGATION DATA EVALUATION
REPORT FOR THE LDW UPPER REACH

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Source: Topographic survey by True North Land Surveying, Inc. performed between June 30, 2021 and August 10, 2021. Bathymetric survey by Northwest Hydro performed between April 18, 2019 and May 15, 2019. Additional survey by Northwest Hydro performed June 2020. Composite bathymetry data updated December 23, 2020. 2016 LiDAR by Puget Sound LiDAR Consortium http://pugetsoundlidar.ess.washington.edu/lidardata/restricted/projects/2016king_county.html
Horizontal Datum: Washington State Plane, North Zone, North American Datum of 1983/91, U.S. Survey Feet
Vertical Datum: Mean Lower Low Water (MLLW)

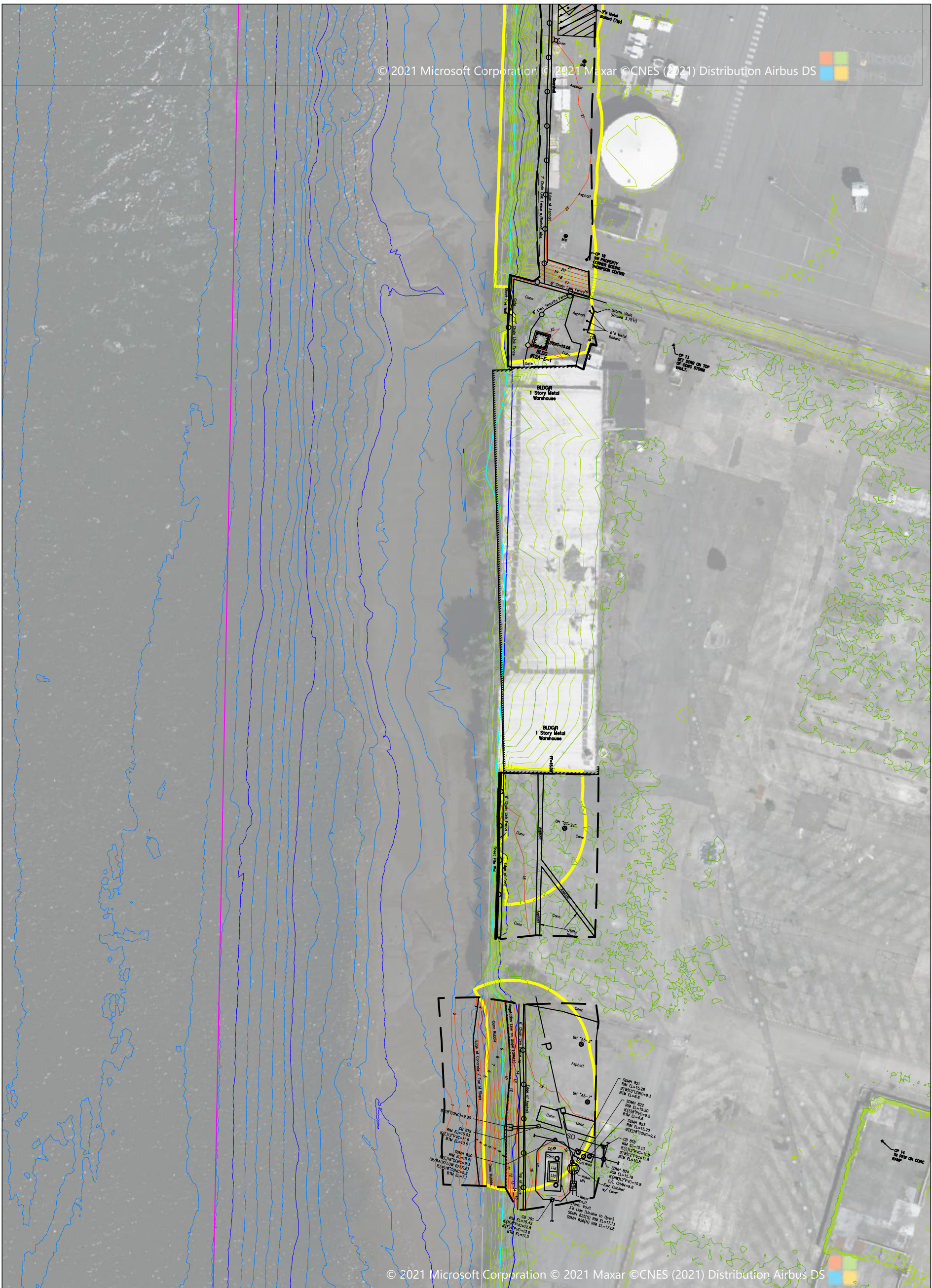
- Legend:**
- | | |
|--|--|
| --- Federal Navigation Channel | --- 2021 True North Survey Limits |
| --- Channel Centerline | --- 2021 True North Contours (1' & 5' Intervals) |
| --- LDW Upper Reach Approximate Boundary | --- 2019/2020 Bathymetry by Others (1' & 5' Intervals) |
| --- Proposed Topographic Survey Area | --- 2016 LiDAR by Others (1' & 5' Intervals) |



Map G1-3.
Topographic Survey Area,
River Mile 3.8E

PRE-DESIGN INVESTIGATION DATA EVALUATION
REPORT FOR THE LDW UPPER REACH

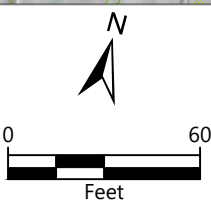
DRAFT



Source: Topographic survey by True North Land Surveying, Inc. performed between June 30, 2021 and August 10, 2021. Bathymetric survey by Northwest Hydro performed between April 18, 2019 and May 15, 2019. Additional survey by Northwest Hydro performed June 2020. Composite bathymetry data updated December 23, 2020. 2016 LiDAR by Puget Sound LiDAR Consortium http://pugetsoundlidar.ess.washington.edu/lidardata/restricted/projects/2016king_county.html
Horizontal Datum: Washington State Plane, North Zone, North American Datum of 1983/91, U.S. Survey Feet
Vertical Datum: Mean Lower Low Water (MLLW)

Legend:

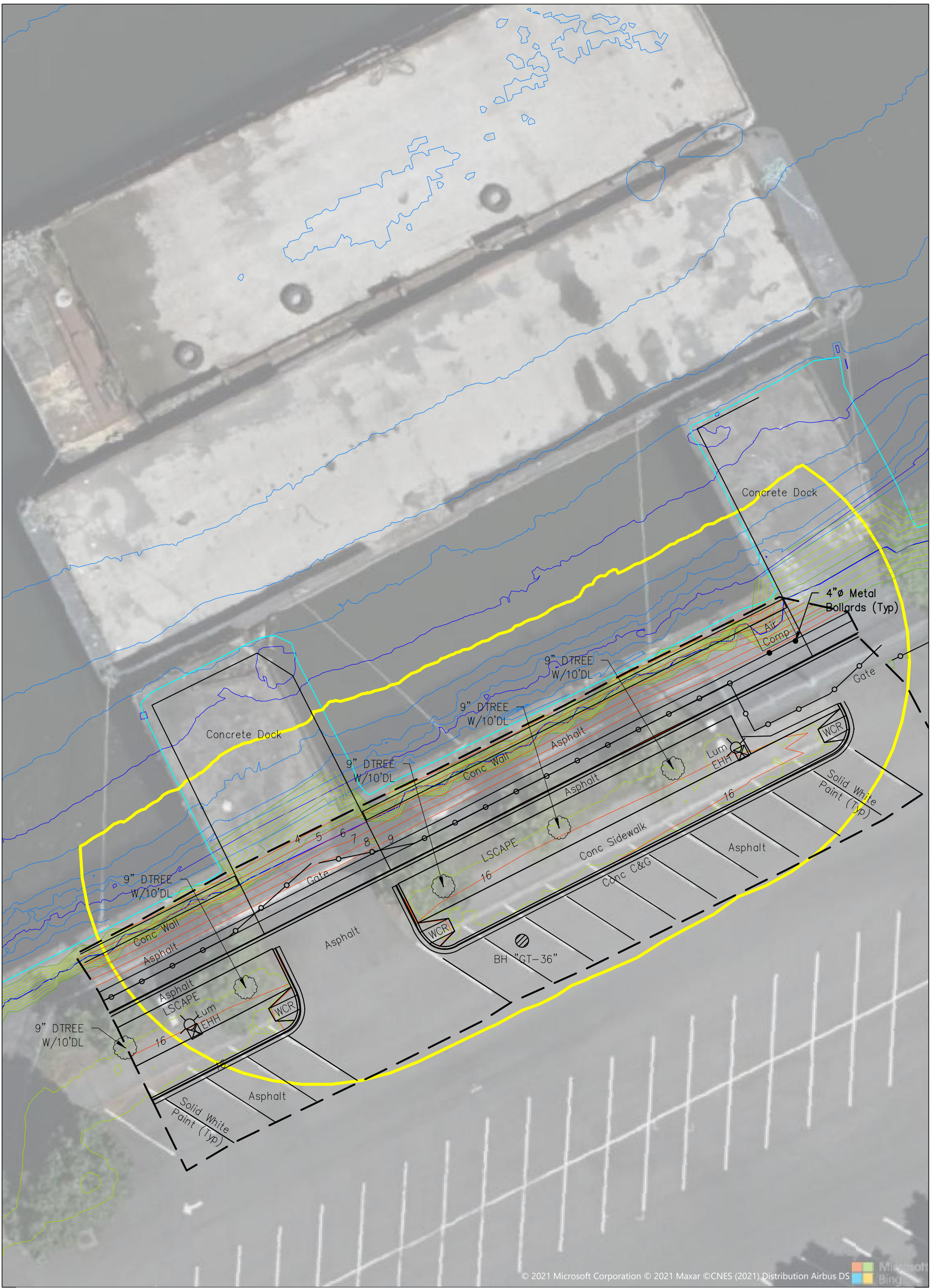
- | | |
|--|--|
| — — — Federal Navigation Channel | — — — 2021 True North Survey Limits |
| — — — Channel Centerline | — — — 2021 True North Contours (1' & 5' Intervals) |
| — — — LDW Upper Reach Approximate Boundary | — — — 2019/2020 Bathymetry by Others (1' & 5' Intervals) |
| — — — Proposed Topographic Survey Area | — — — 2016 LiDAR by Others (1' & 5' Intervals) |



**Map G1-4.
Topographic Survey Area,
River Mile 3.9E**

PRE-DESIGN INVESTIGATION DATA EVALUATION
REPORT FOR THE LDW UPPER REACH

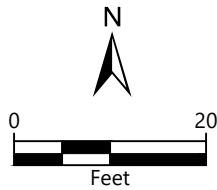
DRAFT



Source: Topographic survey by True North Land Surveying, Inc. performed between June 30, 2021 and August 10, 2021. Bathymetric survey by Northwest Hydro performed between April 18, 2019 and May 15, 2019. Additional survey by Northwest Hydro performed June 2020. Composite bathymetry data updated December 23, 2020. 2016 LiDAR by Puget Sound LiDAR Consortium http://pugetsoundlidar.ess.washington.edu/lidardata/restricted/projects/2016king_county.html
Horizontal Datum: Washington State Plane, North Zone, North American Datum of 1983/91, U.S. Survey Feet
Vertical Datum: Mean Lower Low Water (MLLW)

Legend:

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|--------------------------------------|--|
| --- Federal Navigation Channel | --- 2021 True North Survey Limits |
| 250+00 Channel Centerline | 2021 True North Contours (1' & 5' Intervals) |
| LDW Upper Reach Approximate Boundary | 2019/2020 Bathymetry by Others (1' & 5' Intervals) |
| Proposed Topographic Survey Area | 2016 LiDAR by Others (1' & 5' Intervals) |

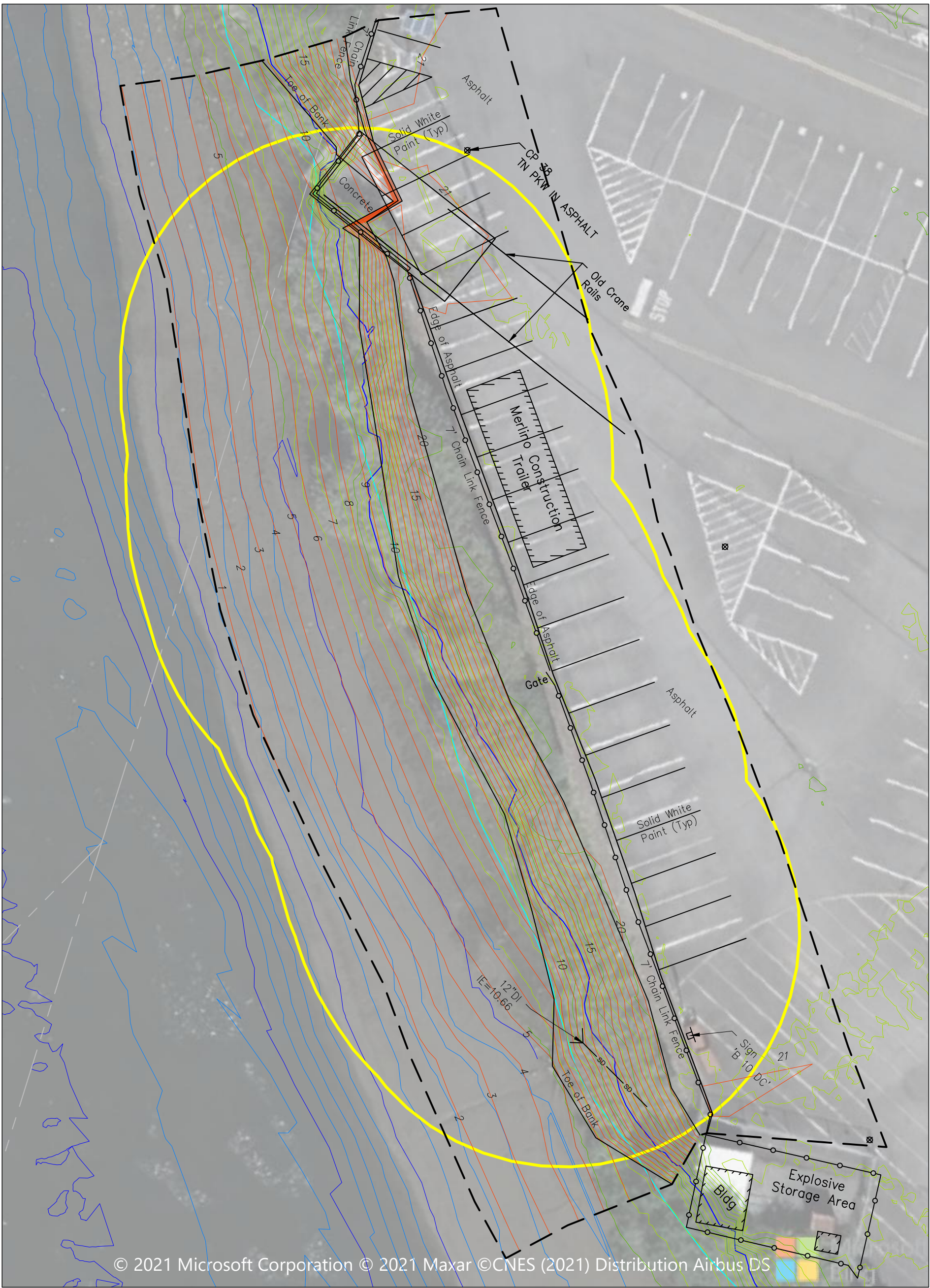


Map G1-6.
Topographic Survey Area,
River Mile 4.2E (Slip 6)

PRE-DESIGN INVESTIGATION DATA EVALUATION
REPORT FOR THE LDW UPPER REACH

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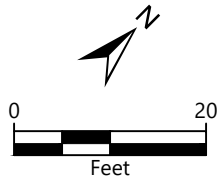
Feb 04, 2022 9:58am lgrlga \\gala\CAD\Projects\0067-King County\LDW Upper Reach Engineering Services\0067-RP-021 True North Survey.dwg Map G1-7



Source: Topographic survey by True North Land Surveying, Inc. performed between June 30, 2021 and August 10, 2021. Bathymetric survey by Northwest Hydro performed between April 18, 2019 and May 15, 2019. Additional survey by Northwest Hydro performed June 2020. Composite bathymetry data updated December 23, 2020. 2016 LiDAR by Puget Sound LiDAR Consortium http://pugetsoundlidar.ess.washington.edu/lidardata/restricted/projects/2016king_county.html
Horizontal Datum: Washington State Plane, North Zone, North American Datum of 1983/91, U.S. Survey Feet
Vertical Datum: Mean Lower Low Water (MLLW)

Legend:

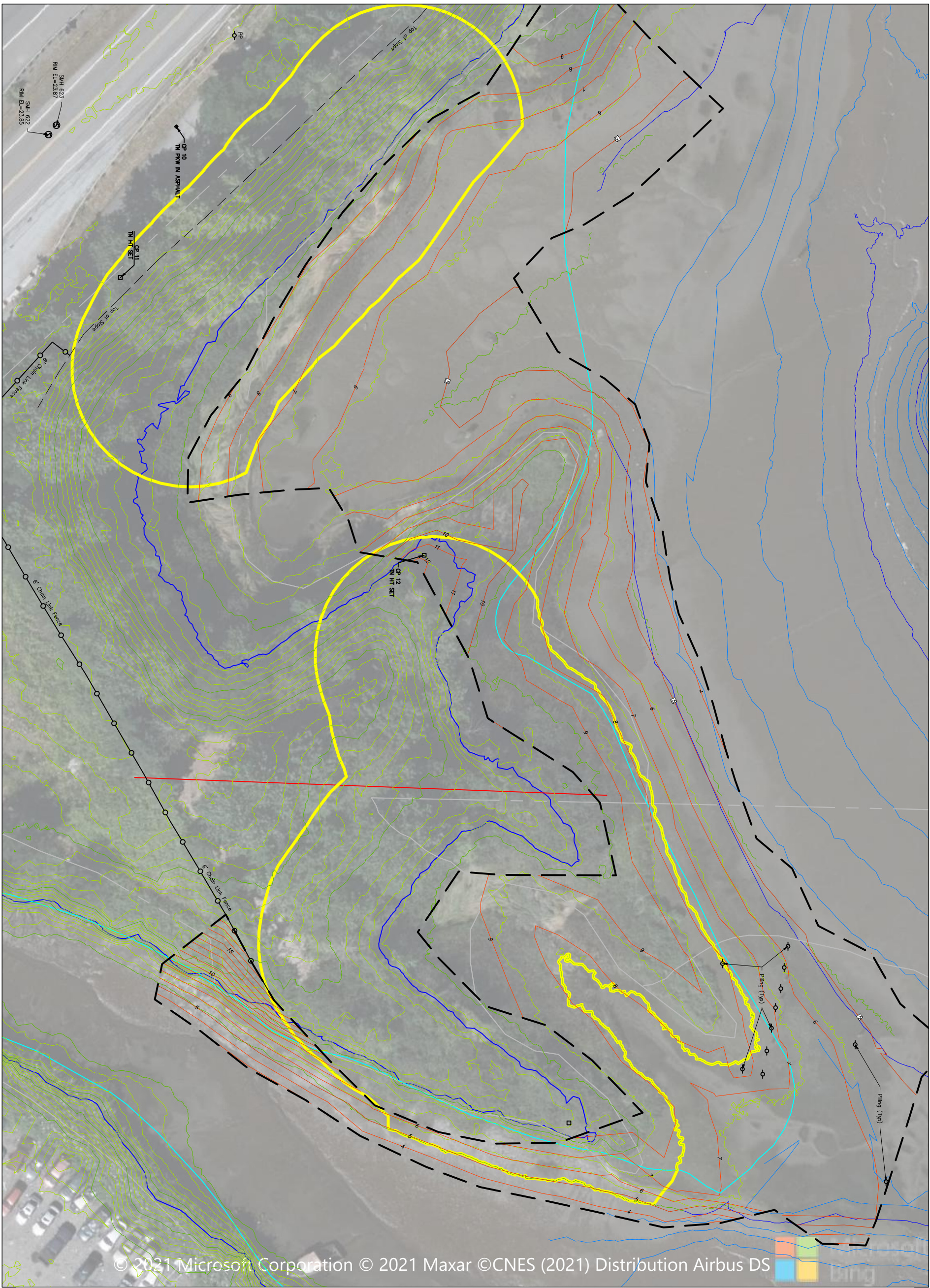
- | | |
|--|--|
| --- Federal Navigation Channel | --- 2021 True North Survey Limits |
| --- Channel Centerline | --- 2021 True North Contours (1' & 5' Intervals) |
| --- LDW Upper Reach Approximate Boundary | --- 2019/2020 Bathymetry by Others (1' & 5' Intervals) |
| --- Proposed Topographic Survey Area | --- 2016 LiDAR by Others (1' & 5' Intervals) |



**Map G1-7.
Topographic Survey Area,
River Mile 4.6E**

PRE-DESIGN INVESTIGATION DATA EVALUATION
REPORT FOR THE LDW UPPER REACH

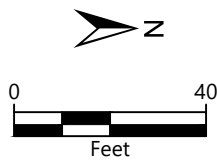
DRAFT



Source: Topographic survey by True North Land Surveying, Inc. performed between June 30, 2021 and August 10, 2021. Bathymetric survey by Northwest Hydro performed between April 18, 2019 and May 15, 2019. Additional survey by Northwest Hydro performed June 2020. Composite bathymetry data updated December 23, 2020. 2016 LiDAR by Puget Sound LiDAR Consortium http://pugetsoundlidar.ess.washington.edu/lidardata/restricted/projects/2016king_county.html
Horizontal Datum: Washington State Plane, North Zone, North American Datum of 1983/91, U.S. Survey Feet
Vertical Datum: Mean Lower Low Water (MLLW)

Legend:

- | | |
|--|--|
| --- Federal Navigation Channel | --- 2021 True North Survey Limits |
| --- Channel Centerline | --- 2021 True North Contours (1' & 5' Intervals) |
| --- LDW Upper Reach Approximate Boundary | --- 2019/2020 Bathymetry by Others (1' & 5' Intervals) |
| --- Proposed Topographic Survey Area | --- 2016 LiDAR by Others (1' & 5' Intervals) |



Map G1-8.
Topographic Survey Area,
River Mile 4.7W

PRE-DESIGN INVESTIGATION DATA EVALUATION
REPORT FOR THE LDW UPPER REACH

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